

Title (en)
BUCK-BOOST DC/DC CONVERTER

Title (de)
AUFWÄRTS/ABWÄRTSGLEICHSTROMWANDLER

Title (fr)
CONVERTISSEUR CONTINU CONTINU ABAISSEUR-ÉLEVATEUR

Publication
EP 1994633 B1 20180523 (EN)

Application
EP 07712442 A 20070305

Priority
• EP 2007052057 W 20070305
• DE 102006009956 A 20060303

Abstract (en)
[origin: WO2007099174A1] A buck-boost DC/DC converter includes an inductor and a power stage (10) having a set of switches selectively connecting the inductor between a voltage input (Vin), a voltage output (Vout) and a reference level (Vref) in accordance with buck or boost mode. The converter has a switch control block (12) providing control signals to the set of switches in the power stage (10). A comparator block (14) provides to the switch control block (12) a first pulse width modulation signal in buck mode and a second pulse width modulation signal in boost mode. A ramp generator block (16) provides to the comparator block (14) a first ramp signal for buck mode and a second ramp signal for boost mode. An overlap control block (20) provides a ramp shift signal to the ramp generator (16) in response to a detection signal Whenever actuation of all switches in the power stage within the same clock period is detected, the ramp signals are adjusted in a sense to reduce the overlap between the ramp signals.

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